

IN THE CLAIMS:

1. (PREVIOUSLY PRESENTED) A vapor compression system comprising:
 - a compression device to compress a refrigerant to a high pressure;
 - a heat rejecting heat exchanger for cooling the refrigerant, wherein water absorbs heat from the refrigerant flowing through said heat rejecting heat exchanger;
 - an expansion device for reducing the refrigerant to a low pressure;
 - a heat accepting heat exchanger for evaporating the refrigerant; and
 - an auxiliary heater that selectively heats at least one of the refrigerant and the water.
2. (WITHDRAWN) The vapor compression system as recited in claim 1 wherein said heat rejecting heat exchanger includes a fluid outlet and the water exits the heat rejecting heat exchanger through the fluid outlet, and wherein said auxiliary heater directly heats the water that exits said heat rejecting heat exchanger through said fluid outlet.
3. (WITHDRAWN) The vapor compression system as recited in claim 2 including a fluid temperature sensor to detect a temperature of the water that exits said fluid outlet and a control that activates said auxiliary heater when said fluid temperature sensor detects that said temperature of the water is below a threshold value.
4. (WITHDRAWN) The vapor compression system as recited in claim 2 including an ambient temperature sensor to detect an outdoor air temperature and a control that activates said auxiliary heater when said ambient temperature sensor detects that said outdoor air temperature is below a threshold value.

5. (WITHDRAWN) The vapor compression system as recited in claim 2 including an ambient temperature sensor to detect an outdoor air temperature, a water pump to pump the water through said heat rejecting heat exchanger and a control, wherein said control increases a speed of said water pump to lower an exit temperature of the water exiting said heat rejecting heat exchanger and activates said auxiliary heater to heat the water exiting said heat rejecting heat exchanger when said ambient temperature sensor detects that said outdoor air temperature is below a threshold value.
6. (WITHDRAWN) The vapor compression system as recited in claim 1 including a water tank that contains the water heated in the heat rejecting heat exchanger, wherein said heat rejecting heat exchanger includes a fluid outlet in fluid communication with said water tank, and said auxiliary heater heats the water in said water tank.
7. (WITHDRAWN) The vapor compression system as recited in claim 6 further including a fluid temperature sensor to detect a temperature of the water in said water tank.
8. (WITHDRAWN) The vapor compression system as recited in claim 7 further including a control, wherein said control activates said auxiliary heater when said fluid temperature sensor detects that said temperature of the water is below a first threshold value and said control deactivates said auxiliary heater when the fluid temperature sensor detects that said temperature of the water is above a second threshold value.

9. (CURRENTLY AMENDED) A vapor compression system comprising:
a compression device to compress a refrigerant to a high pressure. ~~The vapor compression system as recited in claim 1~~ wherein said compression device ~~further~~ includes a compressor discharge;
a heat rejecting heat exchanger for cooling the refrigerant, wherein water absorbs heat from the refrigerant flowing through said heat rejecting heat exchanger;
an expansion device for reducing the refrigerant to a low pressure;
a heat accepting heat exchanger for evaporating the refrigerant; and
an auxiliary heater that selectively heats at least one of the refrigerant and the water, ~~wherein,~~ and said auxiliary heater heats the refrigerant that exits said compressor through said compressor discharge before the refrigerant enters said heat rejecting heat exchanger.
10. (ORIGINAL) The vapor compression system as recited in claim 9 including an ambient temperature sensor that detects a temperature of outdoor air.
11. (PREVIOUSLY PRESENTED) The vapor compression system as recited in claim 10 further including a control, wherein said control activates said auxiliary heater when said ambient temperature sensor detects that said temperature of said outdoor air is below a threshold value.

12. (PREVIOUSLY PRESENTED) A vapor compression system comprising:
- a compression device to compress a refrigerant to a high pressure, wherein said compression device includes a compressor discharge;
 - a heat rejecting heat exchanger for cooling the refrigerant;
 - an expansion device for reducing the refrigerant to a low pressure;
 - a heat accepting heat exchanger for evaporating the refrigerant;
 - an auxiliary heater that selectively heats the refrigerant, wherein said auxiliary heater heats said refrigerant that exits said compression device through said compressor discharge;
 - an ambient temperature sensor that detects a temperature of outdoor air;
 - a control that activates said auxiliary heater when said ambient temperature sensor detects that said temperature of said outdoor air is below a threshold value; and
 - a defrost sensor that detects a defrosting condition of said heat accepting heat exchanger, wherein said control activates said auxiliary heater when said defrost sensor detects said defrosting condition.
13. (ORIGINAL) The vapor compression system as recited in claim 1 wherein said auxiliary heater is an electric heater.
14. (ORIGINAL) The vapor compression system as recited in claim 1 wherein the refrigerant is carbon dioxide.

15. (PREVIOUSLY PRESENTED) A method of increasing heating capacity of a transcritical vapor compression system including an auxiliary heater, the method comprising the steps of:

compressing a refrigerant to a high pressure with a compression device;

rejecting heat from the refrigerant into water;

expanding the refrigerant to a low pressure;

evaporating the refrigerant; and

activating the auxiliary heater to selectively further heat at least one of the water and the refrigerant with the auxiliary heater.

16. (WITHDRAWN) The method as recited in claim 15 wherein the step of further heating at least one of the water and the refrigerant includes directly heating the water after the step of rejecting heat.

17. (CURRENTLY AMENDED) A method of increasing heating capacity of a transcritical vapor compression system including an auxiliary heater, the method comprising the steps of:

compressing a refrigerant to a high pressure with a compression device;

rejecting heat from the refrigerant into water;

expanding the refrigerant to a low pressure;

evaporating the refrigerant; and

activating the auxiliary heater to selectively further heat at least one of the water and the refrigerant with the auxiliary heater by~~The method as recited in claim 15 wherein the step of further heating at least one of the water and the refrigerant includes~~ directly heating the refrigerant after the step of compressing and before the step of rejecting heat.

18. (WITHDRAWN) The method as recited in claim 16 further including the step of detecting a temperature of the water, wherein the step of activating said auxiliary heater includes activating said auxiliary heater when said temperature is below a threshold value.

19. (PREVIOUSLY PRESENTED) The method as recited in claim 15 further including the step of detecting a temperature of outdoor air, wherein the step of activating said auxiliary heater includes activating said auxiliary heater when said temperature is below a threshold value.
20. (PREVIOUSLY PRESENTED) The vapor compression system as recited in claim 1 wherein said auxiliary heater is only active when the vapor compression system is in operation.
21. (PREVIOUSLY PRESENTED) The vapor compression system as recited in claim 15 wherein the step of activating the auxiliary heater includes activating the auxiliary heater when the vapor compression system is active.
22. (PREVIOUSLY PRESENTED) The vapor compression system as recited in claim 1 wherein said auxiliary heater is inactive when said compression device is inactive.
23. (PREVIOUSLY PRESENTED) The method as recited in claim 15 further including the step of inactivating the auxiliary heater occurs when the compression device is inactive.
24. (CURRENTLY AMENDED) The vapor compression system as recited in claim 1 wherein the refrigerant that is ~~selective~~selectively heated transfers heat to the water when the refrigerant flows through the heat rejecting heat exchanger.
25. (PREVIOUSLY PRESENTED) The method as recited in claim 15 further including the step of transferring heat from the refrigerant that is selectively heated to the water during the step rejecting heat from the refrigerant to the water.